

**STORM WATER POLLUTION PREVENTION PLAN**  
for  
**STREET AND UTILITY IMPROVEMENTS**  
**HERITAGE INDUSTRIAL PARK**

Prepared For:  
City of Alexandria

Submitted By:  
Timothy E. Bayerl, PE

**Project Site Location:**

**The following City of Alexandria roadways:**

Iowa Street – 500' South of 36<sup>th</sup> Ave to 2000' South  
41<sup>st</sup> Avenue – From Dakota St. West 500'

Widseth, Smith Nolting  
Preparation Date: January 2005

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## **1     INTRODUCTION**

The purpose of this project is to install a new sanitary sewer, storm sewer, watermain, and roadways to Heritage Industrial Park. The area is in the Southern part of the city of Alexandria and is undeveloped with the average lot being 5 acres.

## **2     SWPPP CONTENT**

The intent of the Storm Water Pollution Prevention Plan (SWPPP) is as follows:

- Define site characteristics
- Define the type of construction
- Describe practices to be implemented to control erosion and storm water pollutants and minimize sediment discharge
- Create a schedule to ensure erosion and sediment control practices are implemented
- Evaluate the effectiveness for reducing erosion and sediment discharge
- Describe final stabilization practices upon completion of construction

To accomplish the above tasks the SWPPP will include the following information:

- Identify the parties involved with the SWPPP and describe their duties
- Identify team responsible for implementation of the SWPPP
- Description of existing conditions prior to construction
- Identify bodies of water potentially receiving storm water runoff
- Identify drainage areas and potential storm water contaminants
- Describe storm water management controls and BMP's planned to reduce erosion and sediment discharge
- Describe monitoring plans
- Describe implementation schedule

Additional SWPPP and BMP details are found in the approved construction plans and contract documents. Portions of the plans and contract documents are intended to supplement the SWPPP.

### **3 SWPPP PARTICIPANTS AND DUTIES**

**Project Owner:** City of Alexandria  
Jim Taddel – City Administrator  
Tim Schoonhoven – City Engineer

**SWPPP Preparation:** Widseth, Smith and Nolting – Tim Bayerl, PE  
Duties include overseeing preparation of the SWPPP and selection of BMP's to be utilized during construction.

**SWPPP Implementation:** The Contractor must identify a representative at a pre-construction conference. Duties include overseeing Contractor and Sub-Contractor activities and implementing all items identified in the SWPPP. Specific tasks include: Construction scheduling, adherence to the SWPPP, installation of all BMP's, conducting and monitoring employee training regarding erosion protection and sediment control, monitoring and inspection of erosion protection and sediment control items, identification of additional potential pollution sources, incorporation of additional pollution sources to the SWPPP, identification of problem areas, correction of problems encountered with erosion protection and sediment discharge control.

Personnel assigned to inspection and implementation phases of the SWPPP will be identified as part of a scheduled pre-construction conference. At that time, phone and cell numbers for the specific individuals will be made available. The Owner or their designated representative will make periodic site visits during the course of construction to verify components of the SWPPP are being implemented and maintained.

### **4 SWPPP COORDINATOR AND DUTIES**

The Erosion Control (EC) supervisor, as required for the NPDES chain of responsibility, will be the prime contractor. The prime contractor will designate a representative, certified in CSM or Inspector/Installer as appropriate to the work. Any issues arising during construction or permit violations will be addressed by the EC Supervisor who will notify the proper regulatory personnel as listed below:

<u>Agency</u>	<u>Permit</u>	<u>Name</u>	<u>Phone</u>
MPCA	NPDES	Joyce Cieluch	218-846-7387

The EC Supervisor shall be responsible for implementing the SWPPP and maintaining a quality control program. Duties of the EC Supervisor shall include, but not be limited to, the following:

- Oversee installation and maintenance practices identified as BMP's in the SWPPP
- Oversee all contractors on the project including sub-contractors
- Conduct or arrange for all inspection and monitoring procedures

- Identify any deficiencies in the SWPPP and make sure they are addressed and corrected

## **5 SITE LOCATION**

The project site is located on the South side of the City of Alexandria in the S ½ of Section 36, T128N, R38W. A figure attached to this document is a quadrangle map showing the project area.

## **6 CONSTRUCTION TYPE**

Project construction consists of installation of underground sanitary sewer, storm sewer, and watermain piping. Approximately 4,300 lineal feet of underground mainline sanitary sewer, storm sewer, and watermain are required to be installed. Sets of water and sewer services will be installed for extension to future industry. In addition, bituminous surfaced roadways with swales on either side of the roadway and turf restoration will be done following completion of underground pipe installation.

## **7 CONSTRUCTION SCHEDULE**

Construction is planned to start approximately May 1, 2005 contingent upon contractor's work schedule and any other limiting restrictions such as load limits. Underground installation of sewer, storm sewer and watermain will likely take approximately three months. The Contractor and various sub-contractors will be on site between approximately 7:00 a.m. to 7:00 p.m., five or six days a week. Weekly work schedules will vary dependant on tasks being performed and milestones or goals associated with construction. Completion of underground construction is anticipated by June 15, 2005 with all construction completion anticipated by July 15, 2005.

## **8 EXISTING SITE DESCRIPTION**

The project will disturb approximately 4 acres in an industrial area. There are no bodies of water near the project area, but there are many small wetlands in and around it. An attached exhibit shows the project location together with wetland and water body locations.

The Douglas County Soils Survey maps indicates that soils in the project area are in the Arvilla (AtA), (AsB), and (AsC); Sioux (SmB) and (SoE); Sverdup (SpB); Osakis (OsA); Waukon (WaB2); and Marsh (Mh) groups. The project area is made up of mostly AsB, which is present in the North, East, and South sides of the area. SoE, SmB and SpB are located in the middle of the area, while the rest are located around the outside of the project area. AtA is a sandy loam with a thick solom and 0-3% slopes, AsB is a sandy loam with 2-6% slopes, and AsC is a sandy loam with 6-12% slopes. SmB is loamy coarse sand with 0-6% slopes and SoE is gravelly loam coarse sand with 12-35% slopes. SpB is a sandy loam with 2-6% slopes, OsA is loam with 0-3% slopes, WaB2 is loam with 2-6% slopes, and Mh is marsh area. A figure attached to this document shows the Douglas County Soil Survey in the project area.

## **9     SITE PLAN**

Approximately 0.7 acres of clearing / grubbing is anticipated. Clearing efforts are being done mainly on Iowa St. Clearing is necessary for construction of the street.

Approximately 2 acres of impervious surfaces in the form of bituminous roadways and driveways is proposed. No new storm water channels or changes to existing drainage patterns will be created as part of the project. The intent of the project is to improve project area drainage by installation of swales along the roadway edges. Drainage following construction will remain as it currently exists, with additional storage being created in the form of swales along the roadway edges.

Soils excavated for sewer and water installation will be stockpiled along the edges of the trenches and backfilled within 7 days of placement. Soils excavated for roadway grading operations will be stockpiled at a location selected by the Prime Contractor and either stabilized via mulch with perimeter silt fence protection or removed from the site within 7 days of placement.

Plan drawings have been attached to this document showing temporary and permanent erosion and sediment control practices being implemented.

## **10    IDENTIFICATION OF POTENTIAL STORM WATER CONTAMINANTS**

The entire construction area indicated as the work zone will be disturbed to some degree and will have potential for erosion. Good construction practices eliminate many of the potential sources. These practices include daily inspection of all BMP's, inspection for chemical containment and secured lockup, control of potential wash out areas, and preparation for accidental spills of petroleum based fluids.

Potential pollutants result from all construction operations including pipe installation, grading operations and roadway construction. These pollutants may result from the mechanical equipment used for construction or as a result of the construction operation being done.

## **11    POTENTIAL AREAS FOR STORM WATER CONTAMINATION**

The land in the project area is mainly flat with the majority of drainage staying within the project area. Water flow patterns show that the majority of drainage will flow into the PEMC, PEMF and PEMCD wetlands. These are located in the middle of the East side of the project area. Silt boxes will be installed for erosion control

## **12    TEMPORARY AND PERMANENT EROSION CONTROL PRACTICES**

BMP's proposed for temporary and permanent erosion control practices are shown on the attached plan sheets and are further identified as follows:

### **Temporary Erosion Control Methods**

Disturbed areas will be temporary stabilized with mulch in accordance with the following:

- Steeper than 3:1 ..... within 7 days
- 10:1 to 3:1 ..... within 14 days
- Flatter than 10:1 ..... within 21 days

A temporary seed mixture (MnDOT 150) has also been identified for use in cases where disturbed areas are to be left in excess of the time frames listed above. Application will be by the broadcast method with Type 1 (straw) mulch and fertilizer (Analysis 12-12-12).

Other temporary erosion control BMP's proposed with this project include:

- Silt fence placement in all locations where storm water leaves the project area
- Construction entrances at all locations being used for access by construction equipment
- Biorolls on exposed slope areas and waterways
- Inlet protective devices for downstream storm sewer catch basins

#### Permanent Erosion Control Methods

Permanent erosion control is proposed using vegetative covering of all disturbed surfaces following construction. Seed is being proposed as shown on the attached plan sheets.

Permanent seed shall be a blended mix of grasses which has been previously utilized in the central Minnesota with good results. The mix will be MnDOT Mixture 250 GR.

### **13 CONSTRUCTION PRACTICES TO MINIMIZE STORM WATER CONTAMINATION**

The following practices shall be utilized to minimize the potential for storm water contamination:

- Non hazardous material will be collected and stored securely in a metal dumpster
- Trash and construction debris will be disposed of in the dumpster
- No construction materials will be buried on site
- Licensed waste management handler will collect and dispose of dumpster debris
- Portable sanitary units will be provided for all construction workers
- Licensed sanitary waste management handler will dispose of sanitary waste
- Fertilizers will be stored in covered locations
- Vehicles will be monitored for leaks and preventative maintenance shall be scheduled
- Petroleum products will be stored in tightly sealed, double containment vessels
- Spill kits will be available during equipment fueling and maintenance operations
- Asphalt substances used will be applied according to manufacturers recommendations
- Paint and curing compounds will be tightly sealed and stored when not used
- Excess paint or curing compound shall be disposed of according to manufacturers recommendations
- Spill cleanup material will be available on site. Material shall include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, absorbent material, sand, plastic and metal trash containers.
- Spray guns will be cleaned on removable surfaces such as tarpaulins.

- All spills will be reported immediately.
- Spills that reach storm water conveyance systems connected to State bodies of water (lakes, wetlands, storm sewer, etc) shall be immediately reported to the MPCA State Duty Officer.
- Form release oil will be applied over a pallet covered with absorbent material to collect excess fluid. The absorbent material shall be replaced when saturated.
- Stabilized construction entrances and exits will be constructed to reduce vehicle tracking
- Paved surfaces in the project area shall be swept as necessary to remove mud, silt and dirt. A pick up style broom shall be required.
- Trucks removing material from the site shall be covered.
- All ruts caused by equipment shall be stabilized immediately
- Concrete trucks shall not wash out or deposit excess concrete in areas that are susceptible to storm water leaving the construction site

Any additional BMP's necessary to control erosion and sediment shall be eligible for compensation via Change Order and may be requested by the EC Supervisor through normal construction practices.

#### **14 COORDINATION OF BMP'S WITH CONSTRUCTION ACTIVITIES**

Erosion and sediment control activities will be coordinated with the construction as follows:

- Temporary perimeter controls (silt fence) will be installed prior to any construction activity in the area being protected
- Construction entrances will be placed prior to any construction activity
- Temporary seed will be installed as soon as practical and within the time frames previously identified
- Perimeter controls (silt fence) will remain in place until soils have been stabilized with either seed or sod.

#### **15 MAINTENANCE / INSPECTION PROCEDURES**

Formal inspection of all BMP's employed on the project will be done on a weekly basis and within 24 hours or any storm event per requirements of the NPDES permit. Corrective work shall be done immediately. All inspections and corrective work shall be documented on the Inspection / Maintenance log form and corrective work indicated. The EC Supervisor as designated by the Prime Contractor or his designated personnel shall conduct inspections. The inspections shall verify that the BMP's discussed in this SWPPP are in good condition and are minimizing erosion loss from the project site. The following are practices that will be used to maintain erosion and sediment controls:

- Silt control devices shall be inspected for sediment, tears or other damage that renders them ineffective
- Sediment shall be removed from silt fence when they have reached 1/3 of the height of the silt fence
- Temporary and permanent seeding will be inspected for bare spots or washouts
- Construction entrances / exits will be inspected for sediment tracking
- Culvert outlets will be inspected to ensure they are open, intact and functioning



- Inspection / Maintenance report shall be made following each inspection
- Complete Maintenance / Inspection forms shall be maintained on-site during the entire course of the project
- Any design modifications made to the plan that impact the SWPPP shall be immediately noted and the SWPPP amended

The Prime Contractor shall maintain permanent erosion protection via seed and sod for a period of 30 growing days following seed application. Growing days shall be defined as any calendar day exclusive of those days between June 10 and August 10 and from November 1 to April 15. Maintenance shall include watering as necessary, erosion repairs and additional fertilization if necessary. Areas that are not acceptable to the Owner following the 30-day maintenance period shall be re-seeded until acceptance is secured.

Following acceptance of the seed and sod, the City of Alexandria shall be responsible for maintenance of the vegetative covering.

#### **16 EMPLOYEE TRAINING**

An "Employee Training" program shall be implemented by the Prime Contractor and overseen by the EC Supervisor. The education program shall include background on the components and goals of the SWPPP and hands on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of wastes, equipment fueling, proper material storage, and inspection procedures. Employees shall be trained prior to or on their first day on the site. Training shall also be extended to all sub-contractors working on the job site and shall be coordinated by the EC Supervisor.

#### **17 CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **FIGURES**

Site Map – 7.5 Minute Quadrangle

Wetland and Water Body Map

Soils Classification Map of the Project Site

## **APPENDICES**

Inspection Logs

Erosion Control Supervisor Designation

## **CONSTRUCTION PLANS INCLUDED BY REFERENCE**

## **FIGURES**

Site Map – 7.5 Minute Quadrangle

Wetland and Water Body Map

Soils Classification Map of the Project Site

SWPPP-

Heritage Industrial Park

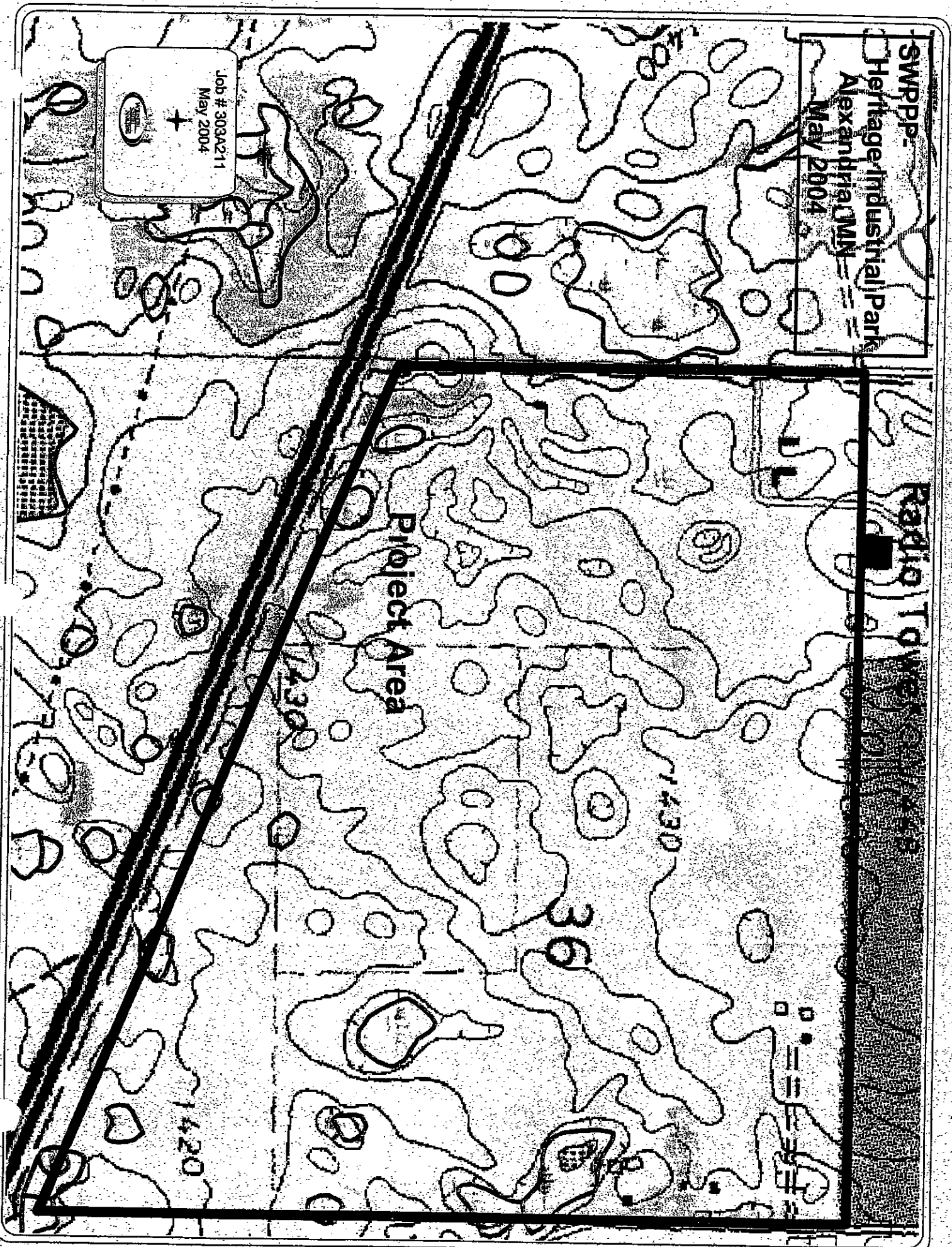
Alexandria, MN

May 2004

Radio Tower

Project Area

Job # 303A211  
May 2004



SWPPP

Heritage Industrial Park  
Alexandria, MN

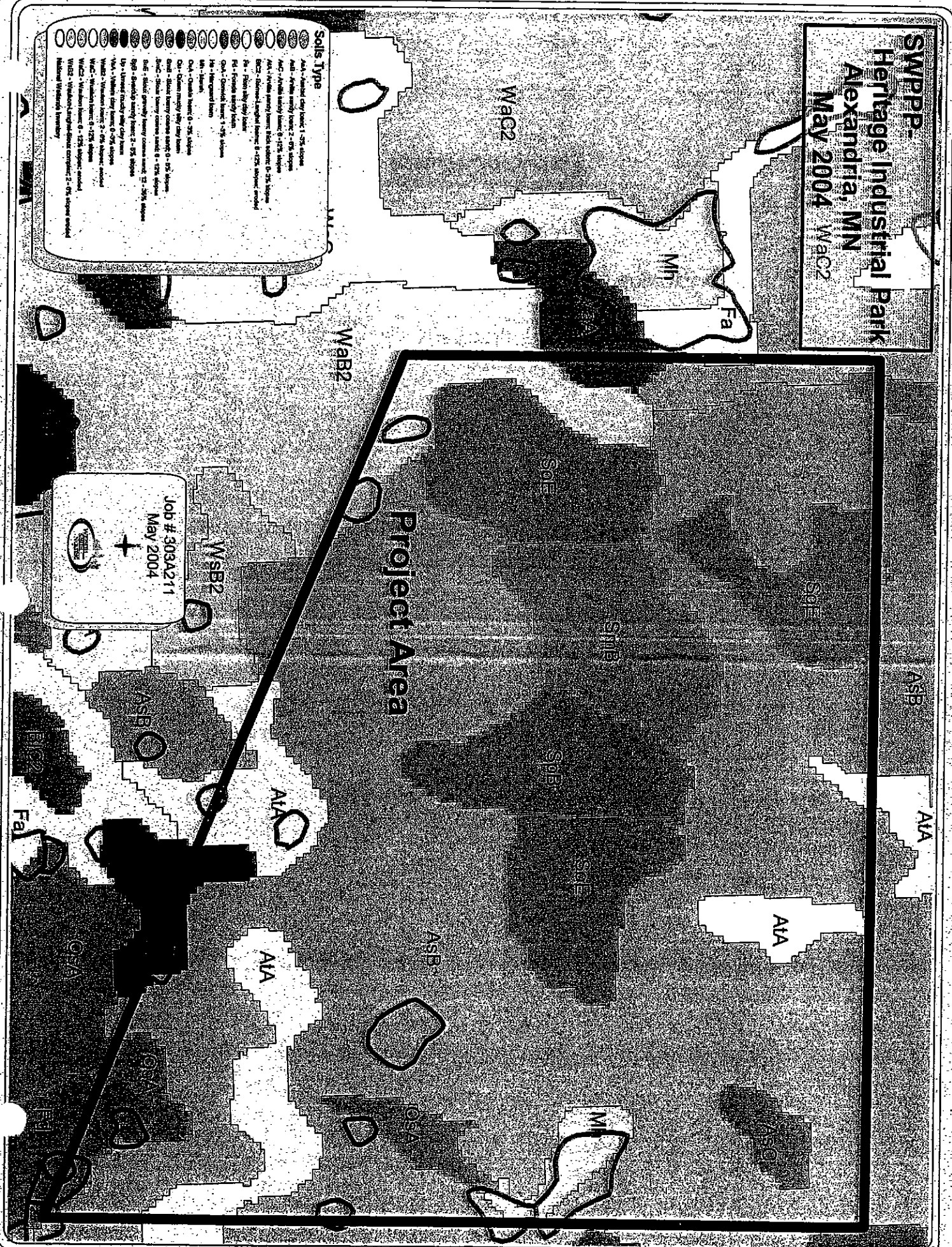
May 2004 WAC2

**Soils Type**

1	As - Aerial City Limit 1 - 2% slope
2	As - Aerial City Limit 2 - 5% slope
3	As - Aerial City Limit 5 - 10% slope
4	As - Aerial City Limit 10 - 15% slope
5	As - Aerial City Limit 15 - 20% slope
6	As - Aerial City Limit 20 - 25% slope
7	As - Aerial City Limit 25 - 30% slope
8	As - Aerial City Limit 30 - 35% slope
9	As - Aerial City Limit 35 - 40% slope
10	As - Aerial City Limit 40 - 45% slope
11	As - Aerial City Limit 45 - 50% slope
12	As - Aerial City Limit 50 - 55% slope
13	As - Aerial City Limit 55 - 60% slope
14	As - Aerial City Limit 60 - 65% slope
15	As - Aerial City Limit 65 - 70% slope
16	As - Aerial City Limit 70 - 75% slope
17	As - Aerial City Limit 75 - 80% slope
18	As - Aerial City Limit 80 - 85% slope
19	As - Aerial City Limit 85 - 90% slope
20	As - Aerial City Limit 90 - 95% slope
21	As - Aerial City Limit 95 - 100% slope
22	As - Aerial City Limit 100 - 105% slope
23	As - Aerial City Limit 105 - 110% slope
24	As - Aerial City Limit 110 - 115% slope
25	As - Aerial City Limit 115 - 120% slope
26	As - Aerial City Limit 120 - 125% slope
27	As - Aerial City Limit 125 - 130% slope
28	As - Aerial City Limit 130 - 135% slope
29	As - Aerial City Limit 135 - 140% slope
30	As - Aerial City Limit 140 - 145% slope
31	As - Aerial City Limit 145 - 150% slope
32	As - Aerial City Limit 150 - 155% slope
33	As - Aerial City Limit 155 - 160% slope
34	As - Aerial City Limit 160 - 165% slope
35	As - Aerial City Limit 165 - 170% slope
36	As - Aerial City Limit 170 - 175% slope
37	As - Aerial City Limit 175 - 180% slope
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39	As - Aerial City Limit 185 - 190% slope
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98	As - Aerial City Limit 480 - 485% slope
99	As - Aerial City Limit 485 - 490% slope
100	As - Aerial City Limit 490 - 495% slope
101	As - Aerial City Limit 495 - 500% slope
102	As - Aerial City Limit 500 - 505% slope
103	As - Aerial City Limit 505 - 510% slope
104	As - Aerial City Limit 510 - 515% slope
105	As - Aerial City Limit 515 - 520% slope
106	As - Aerial City Limit 520 - 525% slope
107	As - Aerial City Limit 525 - 530% slope
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111	As - Aerial City Limit 545 - 550% slope
112	As - Aerial City Limit 550 - 555% slope
113	As - Aerial City Limit 555 - 560% slope
114	As - Aerial City Limit 560 - 565% slope
115	As - Aerial City Limit 565 - 570% slope
116	As - Aerial City Limit 570 - 575% slope
117	As - Aerial City Limit 575 - 580% slope
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119	As - Aerial City Limit 585 - 590% slope
120	As - Aerial City Limit 590 - 595% slope
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122	As - Aerial City Limit 600 - 605% slope
123	As - Aerial City Limit 605 - 610% slope
124	As - Aerial City Limit 610 - 615% slope
125	As - Aerial City Limit 615 - 620% slope
126	As - Aerial City Limit 620 - 625% slope
127	As - Aerial City Limit 625 - 630% slope
128	As - Aerial City Limit 630 - 635% slope
129	As - Aerial City Limit 635 - 640% slope
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133	As - Aerial City Limit 655 - 660% slope
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135	As - Aerial City Limit 665 - 670% slope
136	As - Aerial City Limit 670 - 675% slope
137	As - Aerial City Limit 675 - 680% slope
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139	As - Aerial City Limit 685 - 690% slope
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179	As - Aerial City Limit 885 - 890% slope
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181	As - Aerial City Limit 895 - 900% slope
182	As - Aerial City Limit 900 - 905% slope
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184	As - Aerial City Limit 910 - 915% slope
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190	As - Aerial City Limit 940 - 945% slope
191	As - Aerial City Limit 945 - 950% slope
192	As - Aerial City Limit 950 - 955% slope
193	As - Aerial City Limit 955 - 960% slope
194	As - Aerial City Limit 960 - 965% slope
195	As - Aerial City Limit 965 - 970% slope
196	As - Aerial City Limit 970 - 975% slope
197	As - Aerial City Limit 975 - 980% slope
198	As - Aerial City Limit 980 - 985% slope
199	As - Aerial City Limit 985 - 990% slope
200	As - Aerial City Limit 990 - 995% slope
201	As - Aerial City Limit 995 - 1000% slope

Project Area

Job # 303A211  
May 2004







## EROSION CONTROL SUPERVISOR DESIGNATION

Project: \_\_\_\_\_

Pre-construction conference Date: \_\_\_\_\_

The designated Erosion Control Supervisor

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Phone Number(s): \_\_\_\_\_

\_\_\_\_\_

**APPENDIX C**  
**STORM WATER POLLUTION PREVENTION PLAN**



**STORM WATER POLLUTION PREVENTION PLAN**  
for  
**STREET AND UTILITY IMPROVEMENTS**  
**HERITAGE INDUSTRIAL PARK**

Prepared For:  
**City of Alexandria**

Submitted By:  
**Timothy Schoonhoven, PE**

**Project Site Location:**

**The following City of Alexandria roadways:**

Iowa Street – 1,150' South of 36<sup>th</sup> Ave to 3,100' South  
41<sup>st</sup> Avenue – Iowa St. to 1,330' East to Dakota St.  
42<sup>nd</sup> Avenue – Intersection of 42<sup>nd</sup> Ave. and Minnesota St. to 5,170'  
Southeast and North to 41<sup>st</sup> Ave.

**Widseth, Smith Nolting**  
**Preparation Date: June 3, 2004**

## **1 INTRODUCTION**

The purpose of this project is to install a new sanitary sewer, storm sewer, watermain, and roadways in Heritage Industrial Park. The area is in the Southern part of the city of Alexandria and is undeveloped with the average lot being 5 acres.

## **2 SWPPP CONTENT**

The intent of the Storm Water Pollution Prevention Plan (SWPPP) is as follows:

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- Identify team responsible for implementation of the SWPPP
- Description of existing conditions prior to construction
- Identify bodies of water potentially receiving storm water runoff
- Identify drainage areas and potential storm water contaminants
- Describe storm water management controls and BMP's planned to reduce erosion and sediment discharge
- Describe monitoring plans
- Describe implementation schedule

Additional SWPPP and BMP details are found in the approved construction plans and contract documents. Portions of the plans and contract documents are intended to supplement the SWPPP.

- Identify any deficiencies in the SWPPP and make sure they are addressed and corrected

## **5 SITE LOCATION**

The project site is located on the South side of the City of Alexandria in the S ½ of Section 36, T128N, R38W. A figure attached to this document is a quadrangle map showing the project area.

## **6 CONSTRUCTION TYPE**

Project construction consists of installation of underground sanitary sewer, storm sewer, and watermain piping. Approximately 22,000 lineal feet of underground mainline sanitary sewer, storm sewer, and watermain are required to be installed. Approximately 56 sets of water and sewer services will be installed for extension to existing and future homes. In addition, bituminous surfaced roadways with swales on either side of the roadway and turf restoration will be done following completion of underground pipe installation.

## **7 CONSTRUCTION SCHEDULE**

Construction is planned to start approximately July 1, 2004 contingent upon contractor's work schedule and any other limiting restrictions such as load limits. Underground installation of sewer, storm sewer and watermain will likely take approximately three months. The Contractor and various sub-contractors will be on site between approximately 7:00 a.m. to 7:00 p.m., five or six days a week. Weekly work schedules will vary dependant on tasks being performed and milestones or goals associated with construction. Completion of underground construction is anticipated by December 1, 2004 with all construction completion anticipated by July 15, 2005.

## **8 EXISTING SITE DESCRIPTION**

The project will disturb approximately 90 acres in an industrial area. Approximately .5 acres of work will be conducted over wetlands. There are no bodies of water near the project area, but there are many small wetlands in and around it. An attached exhibit shows the project location together with wetland and water body locations.

The Douglas County Soils Survey maps indicates that soils in the project area are in the Arvilla (AtA), (AsB), and (AsC); Sioux (SmB) and (SoE); Sverdup (SpB); Osakis (OsA); Waukon (WaB2); and Marsh (Mh) groups. The project area is made up of mostly AsB, which is present in the North, East, and South sides of the area. SoE, SmB and SpB are located in the middle of the area, while the rest are located around the outside of the project area. AtA is a sandy loam with a thick solom and 0-3% slopes, AsB is a sandy loam with 2-6% slopes, and AsC is a sandy loam with 6-12% slopes. SmB is loamy coarse sand with 0-6% slopes and SoE is gravelly loam coarse sand with 12-35% slopes. SpB is a sandy loam with 2-6% slopes, OsA is loam with 0-3% slopes, WaB2 is loam with 2-6% slopes, and Mh is marsh area. A figure attached to this document shows the Douglas County Soil Survey in the project area.

Disturbed areas will be temporary stabilized with mulch in accordance with the following:

- Steeper than 3:1..... within 7 days
- 10:1 to 3:1 ..... within 14 days
- Flatter than 10:1..... within 21 days

A temporary seed mixture (MnDOT 150) has also been identified for use in cases where disturbed areas are to be left in excess of the time frames listed above. Application will be by the broadcast method with Type 1 (straw) mulch and fertilizer (Analysis 12-12-12).

Other temporary erosion control BMP's proposed with this project include:

- Silt fence placement in all locations where storm water leaves the project area
- Construction entrances at all locations being used for access by construction equipment
- Biorolls on exposed slope areas and waterways
- Inlet protective devices for downstream storm sewer catch basins

#### Permanent Erosion Control Methods

Permanent erosion control is proposed using vegetative covering of all disturbed surfaces following construction. Seed is being proposed as shown on the attached plan sheets.

Permanent seed shall be a blended mix of the following proportions which has been previously utilized in the City of Glenwood with good results:

Bluegrass, Kentucky – Elite	25%
Bluegrass, Kentucky – Improved	25%
Bluegrass, Kentucky – Low Maintenance	25%
Red fescue, creeping	8%
Rye-grass, perennial	17%

### **13      CONSTRUCTION PRACTICES TO MINIMIZE STORM WATER CONTAMINATION**

The following practices shall be utilized to minimize the potential for storm water contamination:

- Non hazardous material will be collected and stored securely in a metal dumpster
- Trash and construction debris will be disposed of in the dumpster
- No construction materials will be buried on site
- Licensed waste management handler will collect and dispose of dumpster debris
- Portable sanitary units will be provided for all construction workers
- Licensed sanitary waste management handler will dispose of sanitary waste
- Fertilizers will be stored in covered locations
- Vehicles will be monitored for leaks and preventative maintenance shall be scheduled
- Petroleum products will be stored in tightly sealed, double containment vessels
- Spill kits will be available during equipment fueling and maintenance operations
- Asphalt substances used will be applied according to manufacturers recommendations
- Paint and curing compounds will be tightly sealed and stored when not used

- Silt control devices shall be inspected for sediment, tears or other damage that renders them ineffective
- Sediment shall be removed from silt fence when they have reached 1/3 of the height of the silt fence
- Temporary and permanent seeding will be inspected for bare spots or washouts
- Construction entrances / exits will be inspected for sediment tracking
- Culvert outlets will be inspected to ensure they are open, intact and functioning
- Inspection / Maintenance report shall be made following each inspection
- Complete Maintenance / Inspection forms shall be maintained on-site during the entire course of the project
- Any design modifications made to the plan that impact the SWPPP shall be immediately noted and the SWPPP amended

The Prime Contractor shall maintain permanent erosion protection via seed and sod for a period of 30 growing days following seed application. Growing days shall be defined as any calendar day exclusive of those days between June 10 and August 10 and from November 1 to April 15. Maintenance shall include watering as necessary, erosion repairs and additional fertilization if necessary. Areas that are not acceptable to the Owner following the 30-day maintenance period shall be re-seeded until acceptance is secured.

Following acceptance of the seed and sod, the City of Alexandria shall be responsible for maintenance of the vegetative covering.

## **16 EMPLOYEE TRAINING**

An "Employee Training" program shall be implemented by the Prime Contractor and overseen by the EC Supervisor. The education program shall include background on the components and goals of the SWPPP and hands on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of wastes, equipment fueling, proper material storage, and inspection procedures. Employees shall be trained prior to or on their first day on the site. Training shall also be extended to all sub-contractors working on the job site and shall be coordinated by the EC Supervisor.

## **17 CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **FIGURES**

**Site Map – 7.5 Minute Quadrangle**

**Wetland and Water Body Map**

**Soils Classification Map of the Project Site**

SWPPP:

Heritage Industrial Park

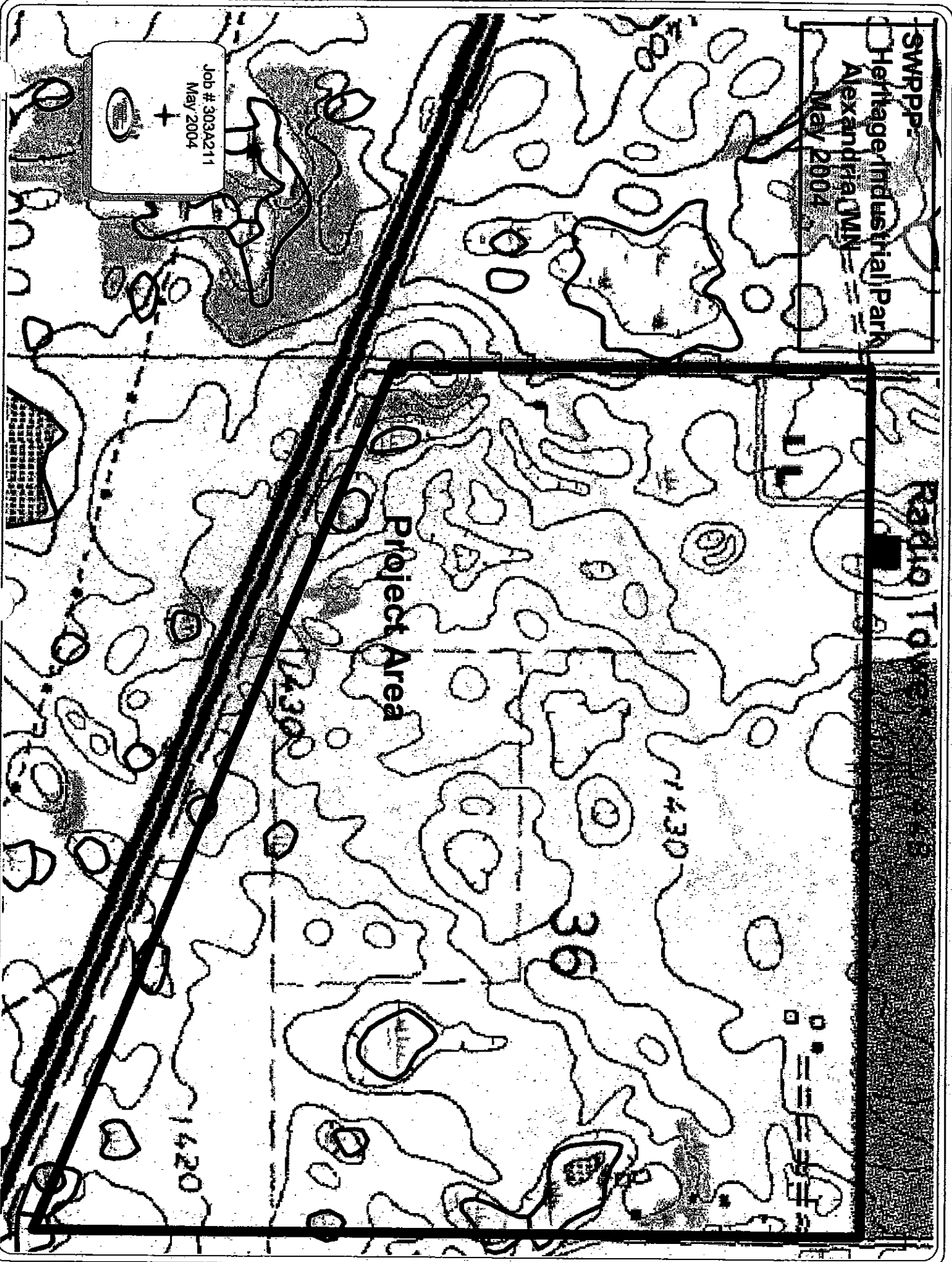
Alexandria, MN

May 2004

Radio Tower

Project Area

Job # 303A211  
May 2004









[illegible]

## EROSION CONTROL SUPERVISOR DESIGNATION

Project: \_\_\_\_\_

Pre-construction conference Date: \_\_\_\_\_

The designated Erosion Control Supervisor

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Phone Number(s): \_\_\_\_\_  
\_\_\_\_\_